

Amendments to the Claims

Please cancel claims 2 and 18. Please amend claims 1, 3, 8, 17, 19, 27, 32 and 34-36.

The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently amended) A method of monitoring and controlling message delivery over a single point-to-point connection including a wireless link between a sending node and a receiving node from a remote node comprising:
 - establishing a single point-to-point connection with a remote node including a wireless link between a sending node and a receiving node, the sending node and the receiving node both communicating over the connection using a common communication protocol;
 - detecting when an incoming message that is destined for the receiving node is received from a remote node over the connection from the sending node by examining the incoming message;
 - determining a timeout corresponding to the time at which an acknowledgment message is expected over the connection from the receiving node by the sending node by the remote node in response to the incoming message; [[and]]
 - forwarding the message over the connection to the receiving node; and
 - sending a suppression message over the connection to the sending node to the remote node if the acknowledgment message has not been sent to the sending node to the remote node before the timeout expires, wherein the incoming message, the acknowledgment message, and the suppression message are all transmitted on the connection, the suppression message suspending messages from being sent by the sending node to the receiving node.
2. (Canceled)

3. (Currently amended) The method of claim [[2]] 1 further comprising sending a resume message to ~~the remote node~~ the sending node.
4. (Original) The method of claim 3 wherein the resume message is sent when the acknowledgment message is sent.
5. (Original) The method of claim 3 wherein the resume message is the acknowledgment message.
6. (Original) The method of claim 1 further comprising forwarding the incoming message over a wireless link to a user.
7. (Original) The method of claim 6 further comprising receiving the acknowledgment from the user via the wireless link.
8. (Currently amended) The method of claim 6 further comprising sending the suppression message immediately if ~~we determine~~ that the wireless link was lost.
9. (Original) The method of claim 1 wherein determining further comprises determining a round-trip time.
10. (Original) The method of claim 9 wherein determining further comprises setting a timer in a timer table.
11. (Original) The method of claim 1 wherein sending the suppression message further comprises generating a message segment.
12. (Original) The method of claim 11 wherein generating the message segment comprises generating according to a predetermined protocol.

13. (Original) The method of claim 12 wherein the predetermined protocol is TCP/IP.
14. (Original) The method of claim 13 wherein the suppression message is indicative of an advertised window of zero.
15. (Original) The method of claim 1 wherein the detecting and the sending do not require modification of a TCP/IP stack at the user.
16. (Original) The method of claim 1 wherein the determining and detecting occur by reading a transport layer segment from a network layer.
17. (Currently amended) A system for monitoring and controlling message delivery over a single point-to-point connection including a wireless link between a sending node and a receiving node from a remote node comprising:
 - a wireless gateway operable to detect when an incoming message that is destined for a receiving node is received from a remote node a sending node over a single point to point connection including a wireless link by examining the incoming message, the sending node and the receiving node both communicating over the connection using a common communication protocol;
 - a timer manager in the wireless gateway operable to determine a timeout corresponding to the time at which an acknowledgment message is expected over the connection from the receiving node by the sending node by the remote node in response to the incoming message; and
 - a segment generator in the wireless gateway responsive to the timeout and operable to generate and send a suppression message over the connection to the sending node to the remote node if the acknowledgment message has not been sent to the sending node to the remote node before the timeout expires, wherein the incoming message, the acknowledgment message, and the suppression message are all adapted to be transmitted on the point to point connection, the suppression message suspending messages from being sent by the sending node to the receiving node.

18. (Canceled)
19. (Currently amended) The system of claim [[18]] 17 wherein the segment generator is further operable to generate and send a resume message to the remote node the sending node, wherein the resume message is operable to allow messages to be sent by the remote node the sending node.
20. (Original) The system of claim 19 wherein the segment generator is operable to send the resume message when the acknowledgment message is sent.
21. (Original) The system of claim 19 wherein the resume message is the acknowledgment message.
22. (Original) The system of claim 17 wherein the wireless gateway is operable to forward the incoming message over a wireless link to a user.
23. (Original) The system of claim 22 wherein the wireless gateway is further operable to receive the acknowledgment from the user via the wireless link.
24. (Original) The system of claim 22 wherein the wireless gateway further comprises a link detector operable to determine if the wireless link is lost.
25. (Original) The system of claim 24 wherein the link detector is further operable to direct the segment generator to send the suppression message immediately if the link detector detects that the wireless link is lost.
26. (Original) The system of claim 17 wherein the timer manager is further operable to determine a round-trip time.

27. (Currently amended) The system of claim 26 wherein the timer manages manager is further operable to set a timer corresponding to the round-trip time in a timer table.
28. (Original) The system of claim 17 wherein sending the suppression message further comprises generating a message segment.
29. (Original) The system of claim 28 wherein the segment generator generates the message segment according to a predetermined protocol.
30. (Original) The system of claim 29 wherein the predetermined protocol is TCP/IP.
31. (Original) The system of claim 30 wherein the suppression message is indicative of an advertised window of zero.
32. (Currently amended) The system of claim 30 wherein the TCP/IP stack corresponding to the remote node the sending node is not modified by the wireless gateway.
33. (Original) The system of claim 17 wherein the timer manager is operable to read a network layer segment from a transport layer.
34. (Currently amended) A computer program product including computer-readable medium comprising computer program code for monitoring and controlling message delivery over a single point-to-point connection including a wireless link between a sending node and a receiving node, from a remote node the computer program code comprising:
computer program code for establishing a single point-to-point connection with a remote node including a wireless link between a sending node and a receiving node, the sending node and the receiving node both communicating over the connection using a common communication protocol;

computer program code for detecting when an incoming message that is destined for the receiving node is received ~~from a remote node~~ over the connection from the sending node by examining the incoming message;

computer program code for determining a timeout corresponding to the time at which an acknowledgment message is expected over the connection from the receiving node by the sending node ~~by the remote node~~ in response to the incoming message;

[[and]]

computer program code for forwarding the message over the connection to the receiving node; and

computer program code for sending a suppression message over the connection to the sending node to the remote node if the acknowledgment message has not been sent to the sending node to the remote node before the timeout expires, wherein the incoming message, the acknowledgment message, and the suppression message are all transmitted on the connection, the suppression message suspending messages from being sent by the sending node to the receiving node.

35. (Currently amended) A computer data signal device for creating a computer digital signal for monitoring and controlling message delivery over a single point-to-point connection including a wireless link between a sending node and a receiving node, ~~from a remote node~~ the computer digital signal comprising:

program code for establishing a single point-to-point connection with a remote node including a wireless link between a sending node and a receiving node, the sending node and the receiving node both communicating over the connection using a common communication protocol;

program code for detecting when an incoming message that is destined for the receiving node is received ~~from a remote node~~ over the connection from the sending node by examining the incoming message;

program code for determining a timeout corresponding to the time at which an acknowledgment message is expected over the connection from the receiving node by the sending node ~~by the remote node~~ in response to the incoming message; [[and]]

program code for forwarding the message over the connection to the receiving node; and

program code for sending a suppression message over the connection to the sending node to the remote node if the acknowledgment message has not been sent to the sending node to the remote node before the timeout expires, wherein the incoming message, the acknowledgment message, and the suppression message are all transmitted on the connection, the suppression message suspending messages from being sent by the sending node to the receiving node.

36. (Currently amended) A system for monitoring and controlling message delivery over a single point-to-point connection including a wireless link between a sending node and a receiving node, from a remote node comprising:

means for establishing a single point-to-point connection with a remote node including a wireless link between a sending node and a receiving node, the sending node and the receiving node both communicating over the connection using a common communication protocol;

means for detecting when an incoming message that is destined for the receiving node is received from a remote node over the connection from the sending node by examining the incoming message;

means for determining a timeout corresponding to the time at which an acknowledgment message is expected over the connection from the receiving node by the sending node by the remote node in response to the incoming message; [[and]]

means for forwarding the message over the connection to the receiving node; and

means for sending a suppression message over the connection to the sending node to the remote node if the acknowledgment message has not been sent to the sending node to the remote node before the timeout expires, the suppression message suspending message from being sent from the sending node to the receiving node.